Applied Structural Mechanics Branch (DES)

Provides structural/mechanical systems development engineering support to the GRC's space and aeronautics project and research activities in the areas of structural design, analysis, optimization, and testing of aerospace structures. Support includes: requirements definition; feasibility studies; conceptual design; detailed development; application; maturation, optimization, and analysis of advanced technologies; initiating procurements; coordinating the fabrication and installation of the hardware; managing the Center's Structural Static Test laboratory; structural systems design, analysis and optimization; stress/deflection, modal, fatigue and fracture analysis, advanced structural design and analysis of composite and ceramic structures; pressure vessel design and analysis; structural/mechanical analysis for aeroelasticity excitation; structural/mechanical design of space flight and ground test hardware; aerospace research rakes and probes design; strength verification tests, stiffness tests, proof pressure tests, fatigue tests, and material coupon tests.